

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL031319\
 Data File : VL033313.D
 Acq On : 14 Mar 2019 12:56
 Operator : SY/AP
 Sample : K1758-01DUP
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 DP-VPB201-AIR-UW-20190305DUP

Quant Time: Mar 15 02:05:50 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL031319AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 14 00:01:31 2019
 QLast Update : Thu Mar 14 00:01:31 2019
 Response via : Initial Calibration

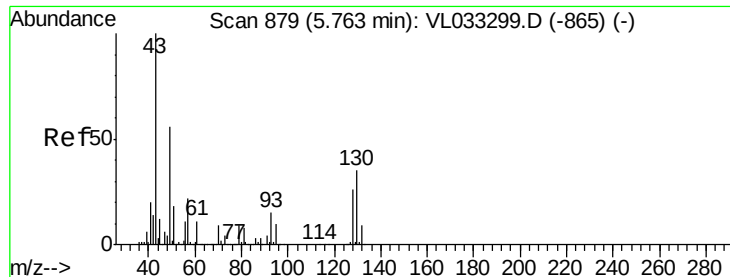
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	711001	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1644171	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1593870	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1267034	10.41	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.10%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	60979	0.464	ppbv	100
3) Chlorodifluoromethane	3.02	51	37338	0.403	ppbv	95
4) Chloromethane	3.17	50	23784	0.474	ppbv #	87
7) Chloroethane	3.60	64	441	0.025	ppbv #	44
8) Dichlorotetrafluoroethane	3.22	85	3961	0.033	ppbv	87
9) Propene	3.05	41	23032	0.550	ppbv #	78
10) Heptane	8.24	43	3832	0.037	ppbv #	1
11) Trichlorofluoromethane	4.01	101	34557	0.261	ppbv	85
12) 1,1,2-Trichlorotrifluoroet	4.55	101	3475	0.039	ppbv #	1
13) Ethanol	3.66	45	60553	4.726	ppbv	96
15) Acetone	3.90	43	271172	2.774	ppbv	90
19) Isopropyl Alcohol	4.05	45	10098	0.169	ppbv #	95
20) Methylene Chloride	4.41	84	82010	2.072	ppbv	92
21) Allyl Chloride	4.44	41	2694	0.046	ppbv #	1
23) Vinyl Acetate	5.14	43	10174	0.072	ppbv #	1
25) Ethyl Acetate	5.78	43	60440	0.339	ppbv #	86
26) Hexane	5.78	57	62533	0.752	ppbv #	48
30) Cyclohexane	7.25	84	6079	0.094	ppbv #	5
34) 2-Butanone	5.34	43	29503	0.260	ppbv	99
35) Carbon Tetrachloride	7.14	117	10170	0.080	ppbv #	74
36) Benzene	7.00	78	28663	0.178	ppbv	96
37) 1,2-Dichloroethane	6.41	62	2131	0.022	ppbv #	81
39) 1,2-Dichloropropane	7.29	63	436391	7.037	ppbv #	25
44) 2,2,4-Trimethylpentane	7.99	57	19789	0.072	ppbv #	74
53) Toluene	9.95	91	159627	0.863	ppbv	99
57) Chlorobenzene	12.29	112	2703	0.021	ppbv #	34
59) m/p-Xylene	13.15	91	5233	0.027	ppbv #	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

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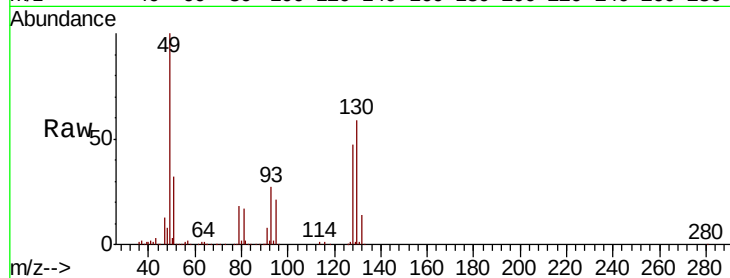
Tgt Ion: 49 Resp: 711001

Ion Ratio Lower Upper

49 100

128 47.4 23.4 70.3

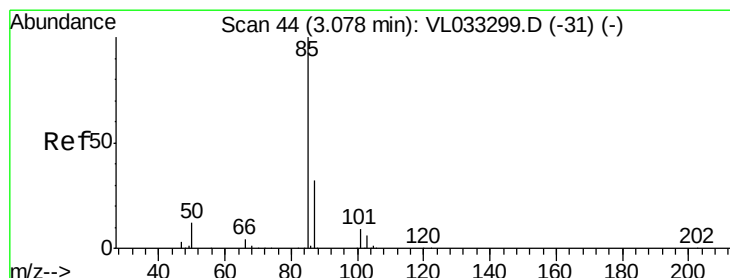
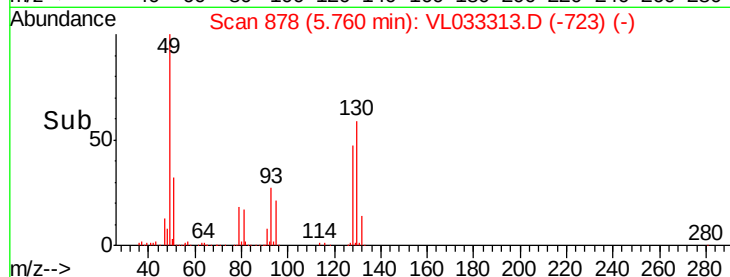
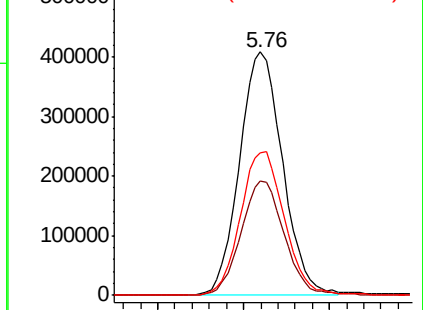
130 60.6 29.9 89.7



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.464 ppbv

RT: 3.08 min Scan# 44

Delta R.T. 0.00 min

Lab File: VL033313.D

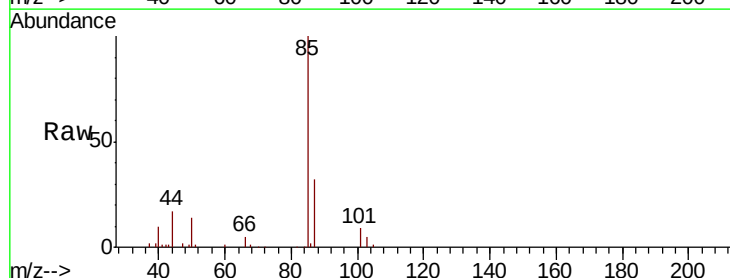
Acq: 14 Mar 2019 12:56

Tgt Ion: 85 Resp: 60979

Ion Ratio Lower Upper

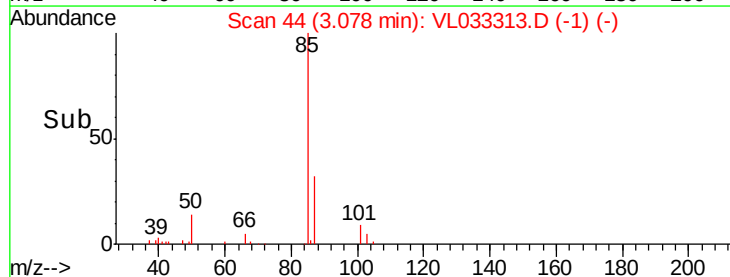
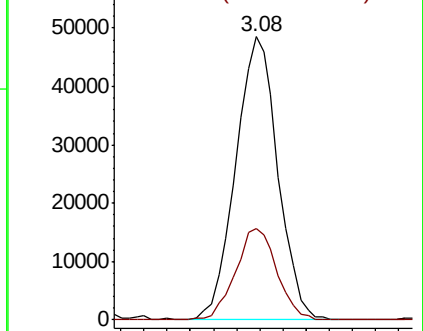
85 100

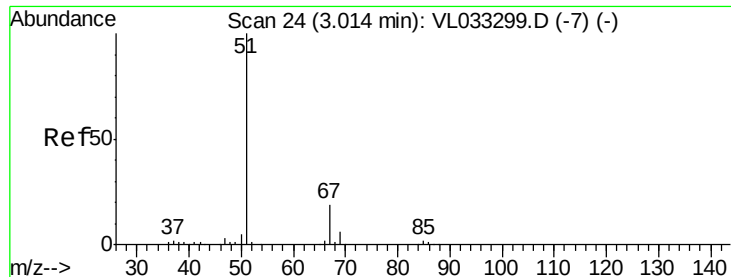
87 32.4 25.8 38.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.403 ppbv

RT: 3.02 min Scan# 26

Delta R.T. 0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

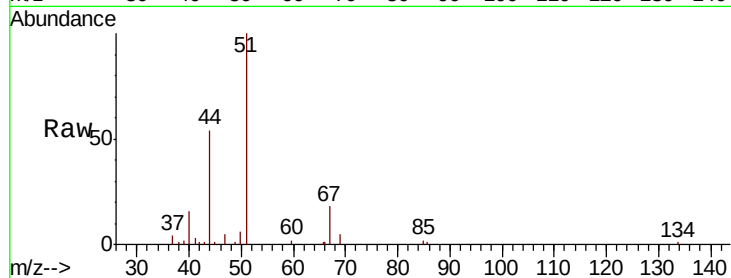
DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 51 Resp: 37338

Ion Ratio Lower Upper

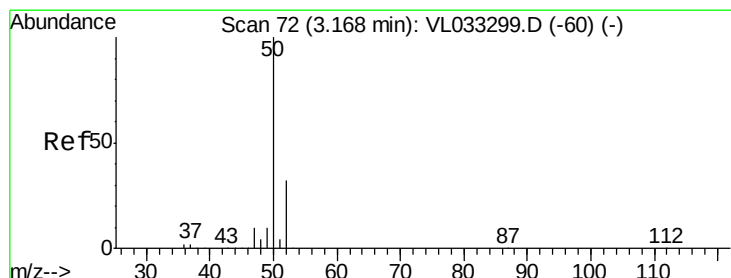
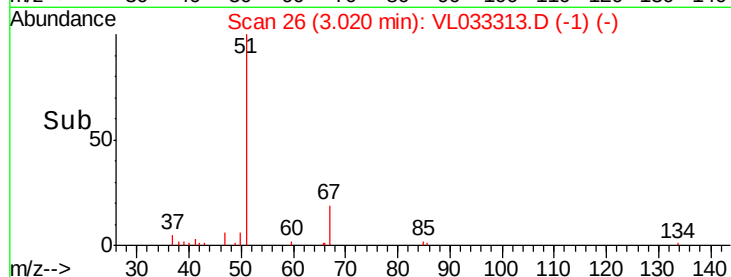
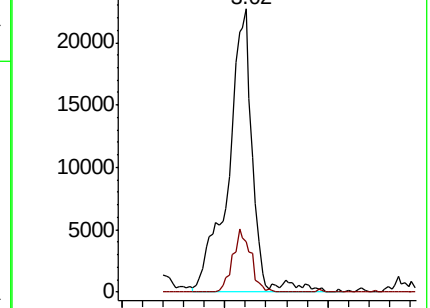
51 100

67 16.6 14.9 22.3



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.474 ppbv

RT: 3.17 min Scan# 73

Delta R.T. 0.00 min

Lab File: VL033313.D

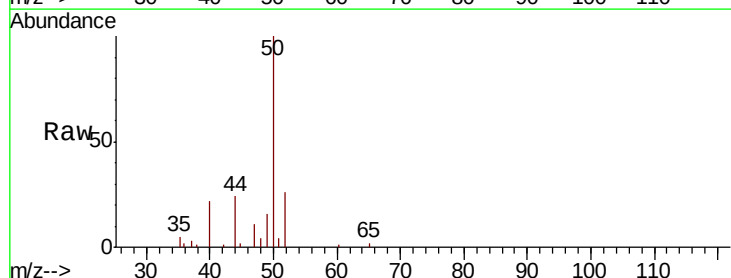
Acq: 14 Mar 2019 12:56

Tgt Ion: 50 Resp: 23784

Ion Ratio Lower Upper

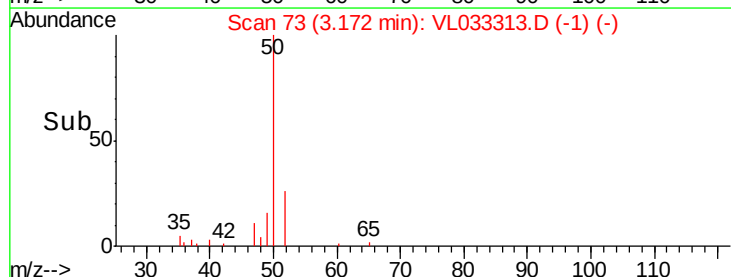
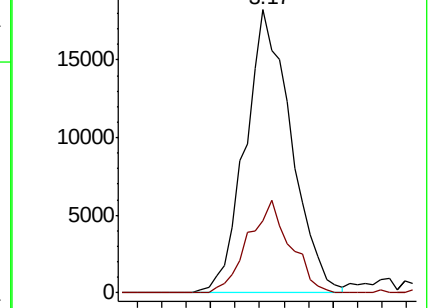
50 100

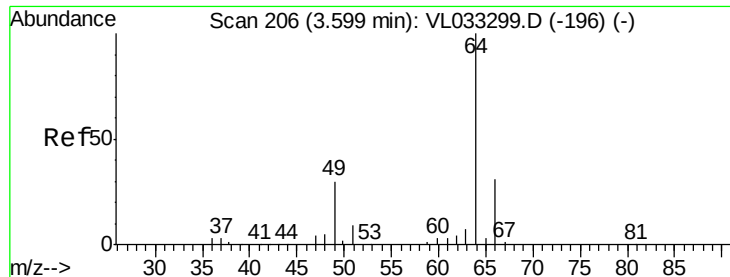
52 24.6 25.7 38.5#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#7

Chloroethane

Concen: 0.025 ppbv

RT: 3.60 min Scan# 206

Delta R.T. 0.00 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

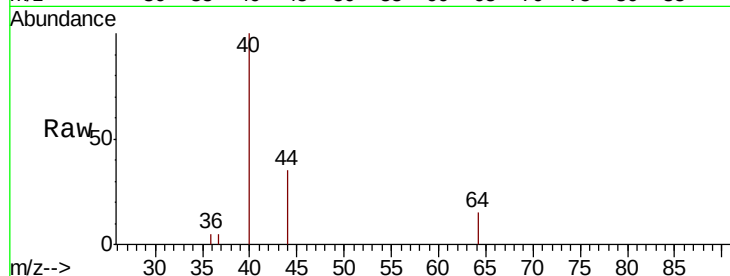
DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 64 Resp: 441

Ion Ratio Lower Upper

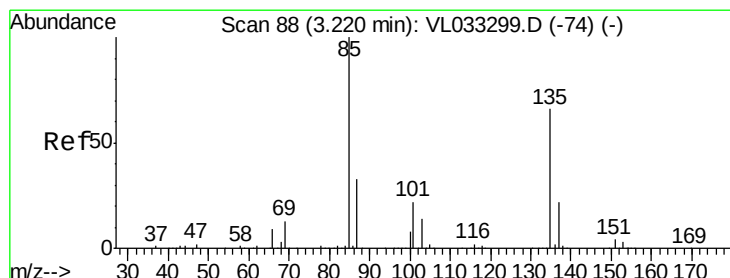
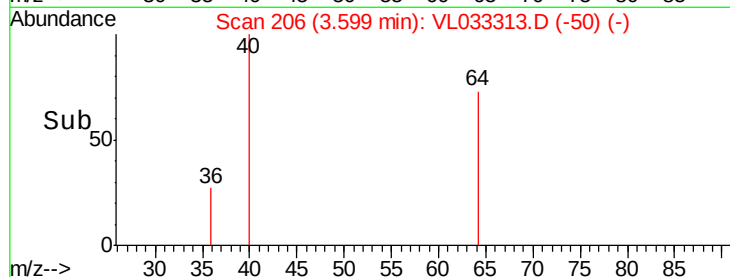
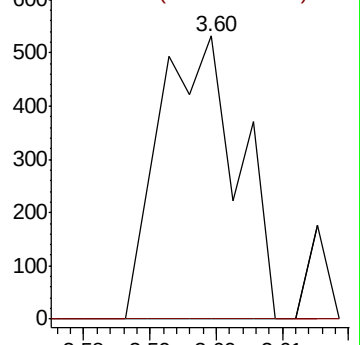
64 100

66 0.0 24.9 37.3#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#8

Dichlorotetrafluoroethane

Concen: 0.033 ppbv

RT: 3.22 min Scan# 89

Delta R.T. 0.00 min

Lab File: VL033313.D

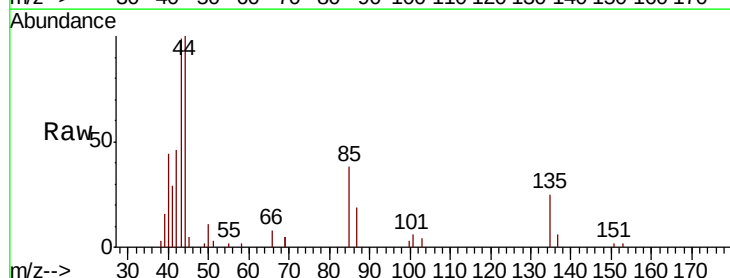
Acq: 14 Mar 2019 12:56

Tgt Ion: 85 Resp: 3961

Ion Ratio Lower Upper

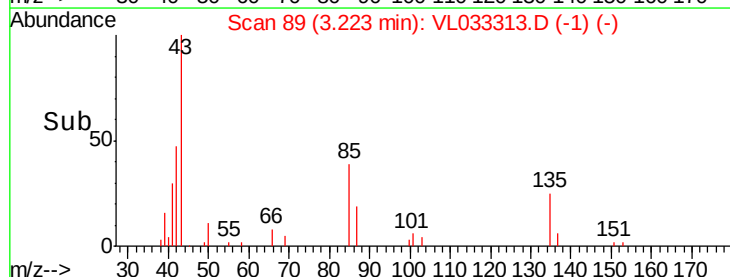
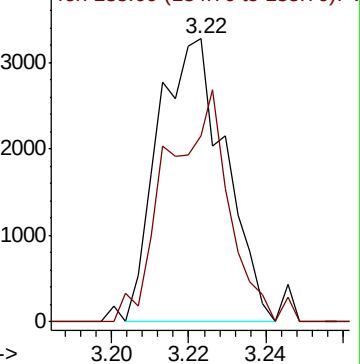
85 100

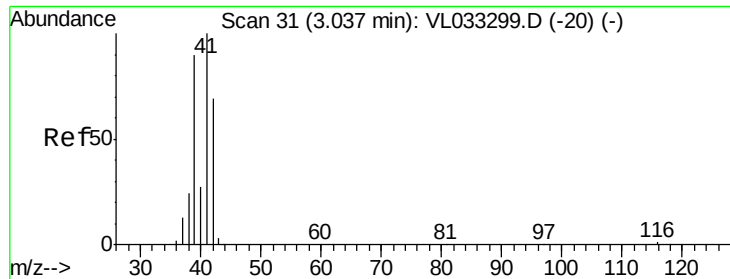
135 76.3 52.9 79.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V





#9

Propene

Concen: 0.550 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

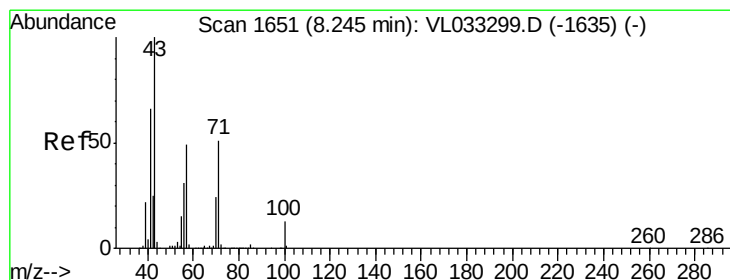
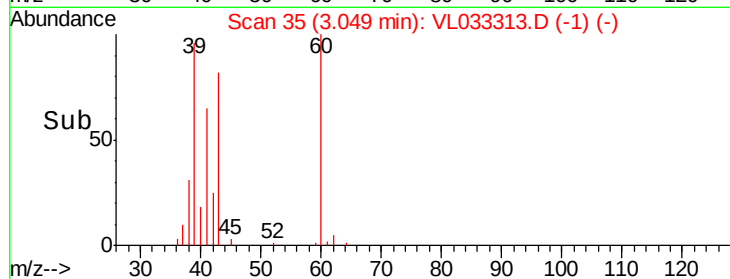
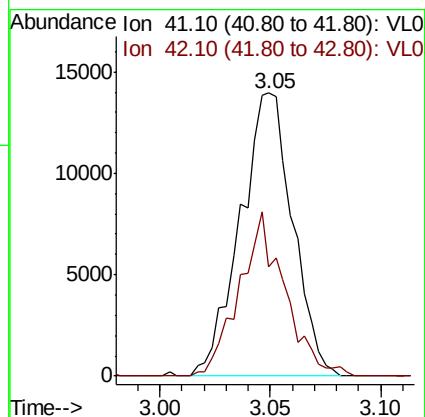
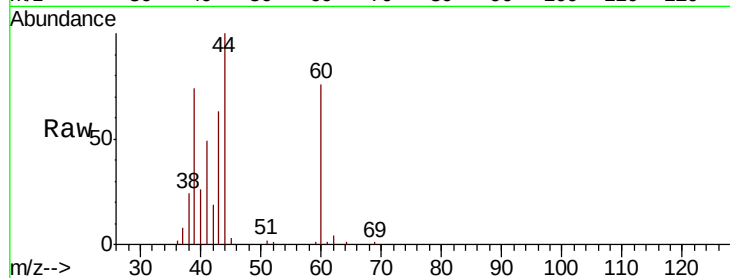
DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 41 Resp: 23032

Ion Ratio Lower Upper

41 100

42 50.1 54.4 81.6#



#10

Heptane

Concen: 0.037 ppbv

RT: 8.24 min Scan# 1648

Delta R.T. -0.01 min

Lab File: VL033313.D

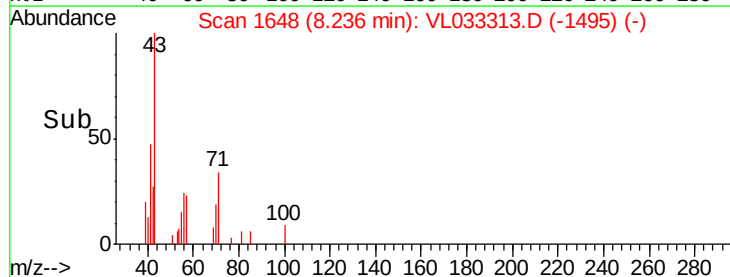
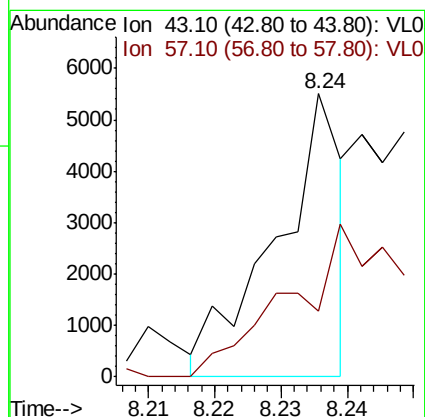
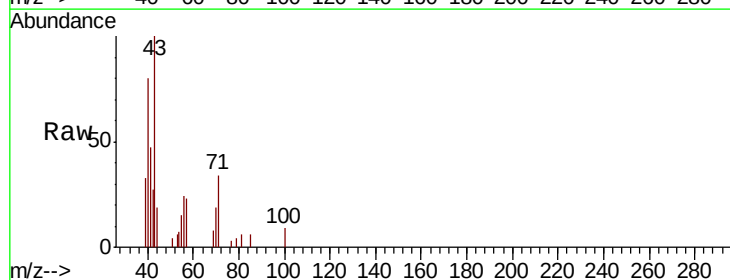
Acq: 14 Mar 2019 12:56

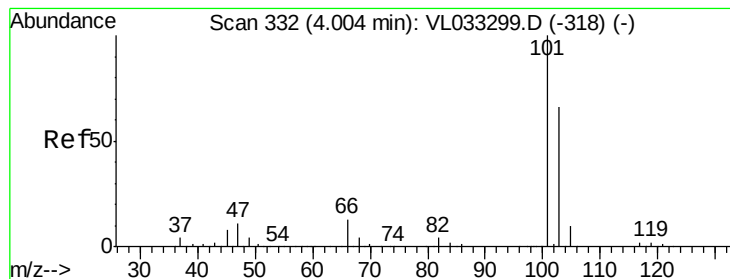
Tgt Ion: 43 Resp: 3832

Ion Ratio Lower Upper

43 100

57 135.5 39.6 59.4#





#11

Trichlorofluoromethane

Concen: 0.261 ppbv

RT: 4.01 min Scan# 334

Delta R.T. 0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

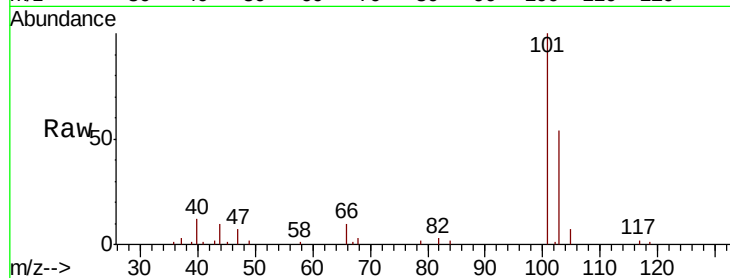
DP-VPB201-AIR-UW-20190305DUP

Tgt Ion:101 Resp: 34557

Ion Ratio Lower Upper

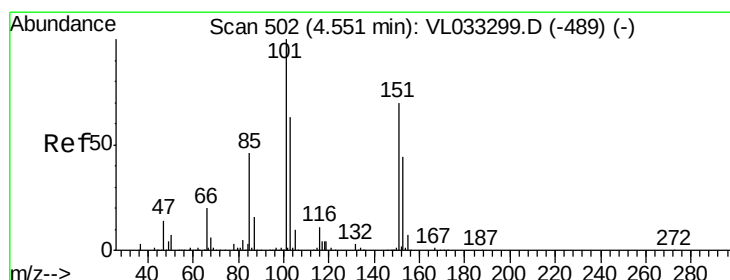
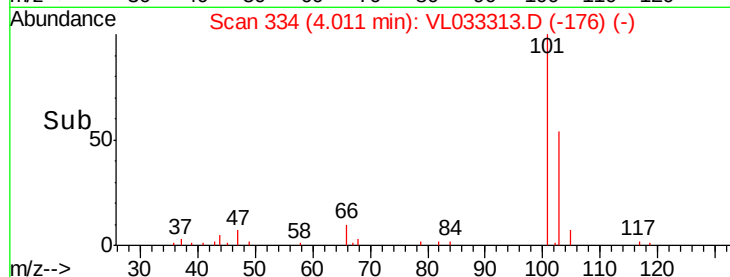
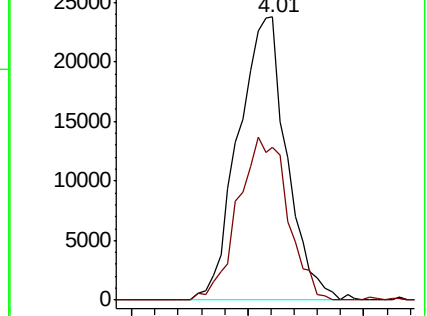
101 100

103 53.8 52.5 78.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.039 ppbv

RT: 4.55 min Scan# 501

Delta R.T. -0.00 min

Lab File: VL033313.D

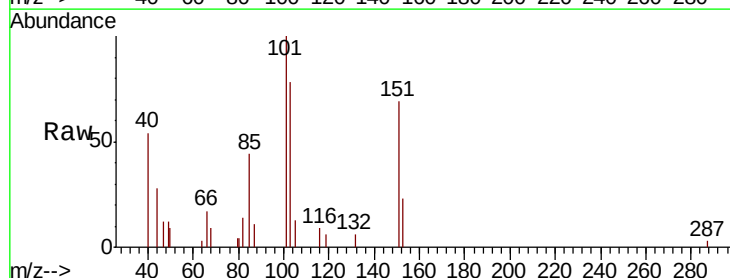
Acq: 14 Mar 2019 12:56

Tgt Ion:101 Resp: 3475

Ion Ratio Lower Upper

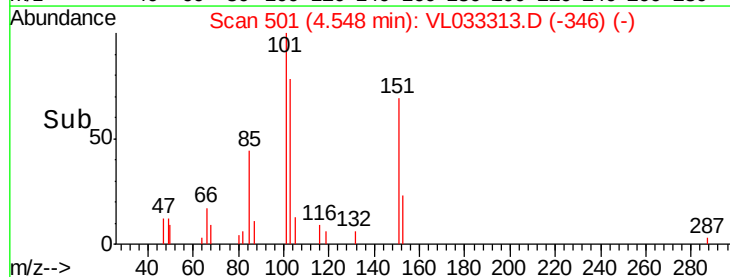
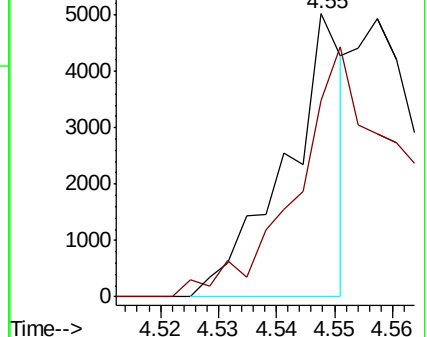
101 100

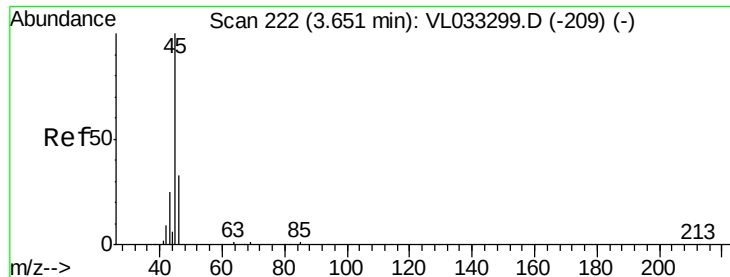
151 159.3 57.2 85.8#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

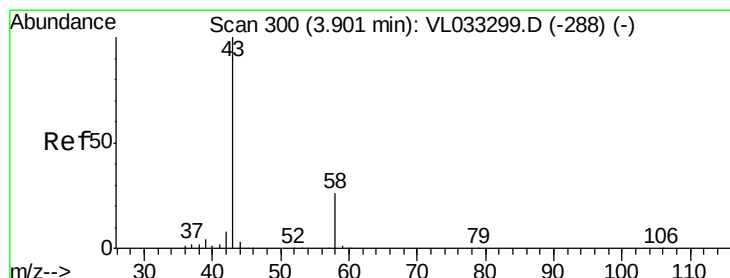
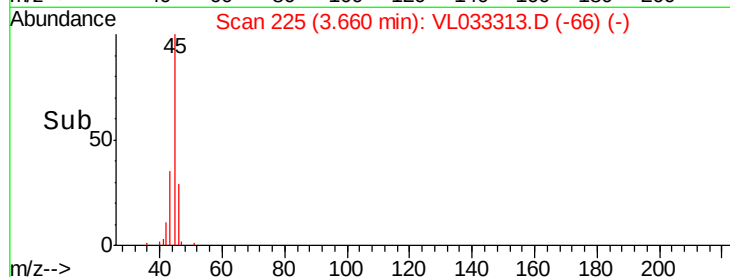
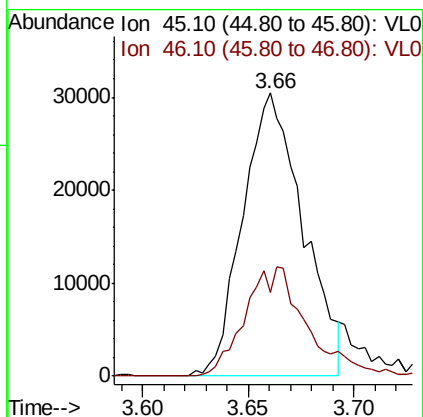
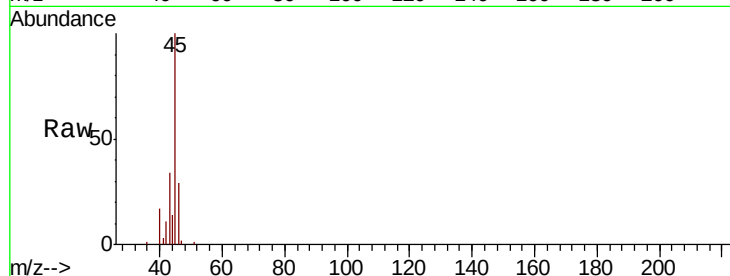




#13
Ethanol
Concen: 4.726 ppbv
RT: 3.66 min Scan# 225
Delta R.T. 0.01 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

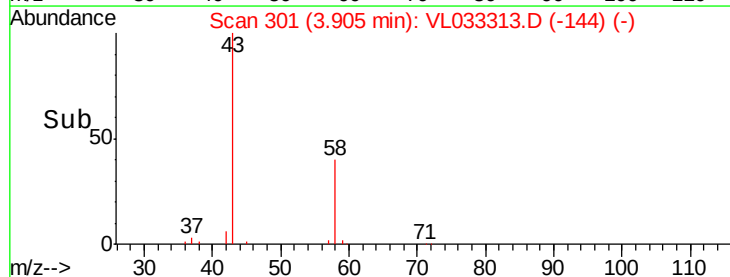
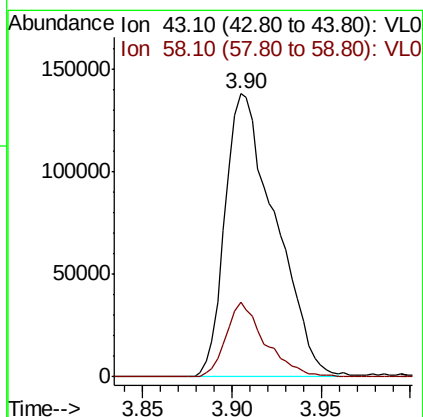
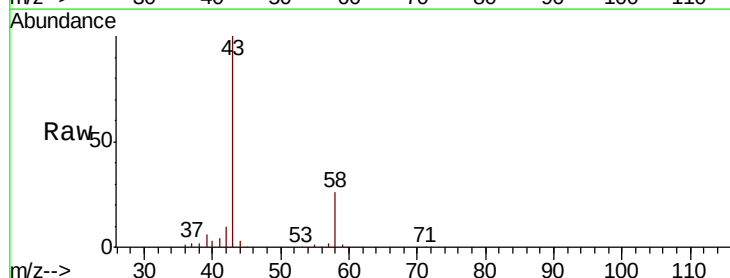
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DP-VPB201-AIR-UW-20190305DUP

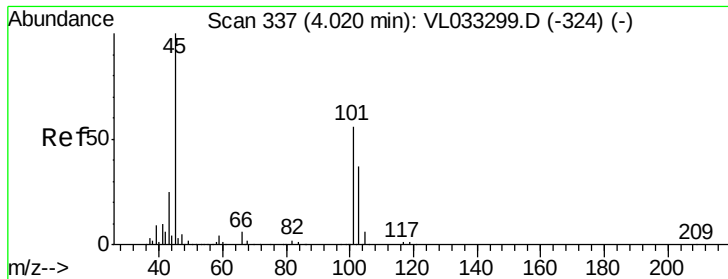
Tgt Ion: 45 Resp: 60553
Ion Ratio Lower Upper
45 100
46 39.9 14.9 59.5



#15
Acetone
Concen: 2.774 ppbv
RT: 3.90 min Scan# 301
Delta R.T. 0.00 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

Tgt Ion: 43 Resp: 271172
Ion Ratio Lower Upper
43 100
58 20.8 20.6 31.0

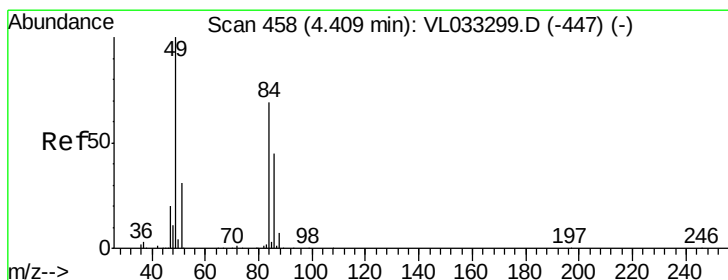
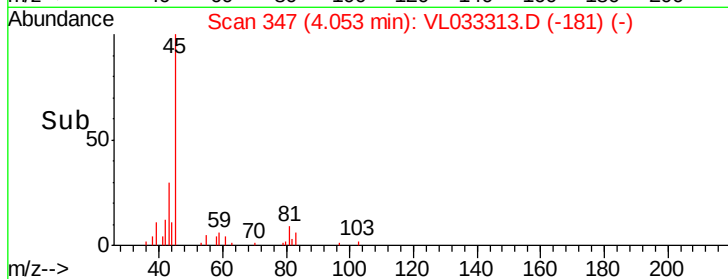
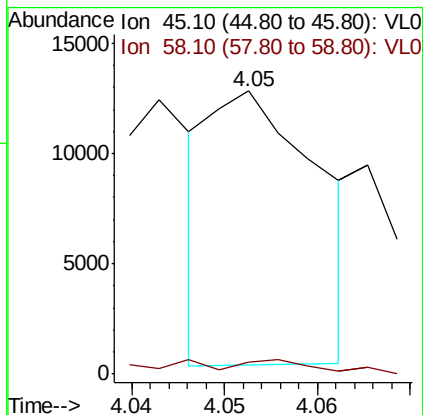
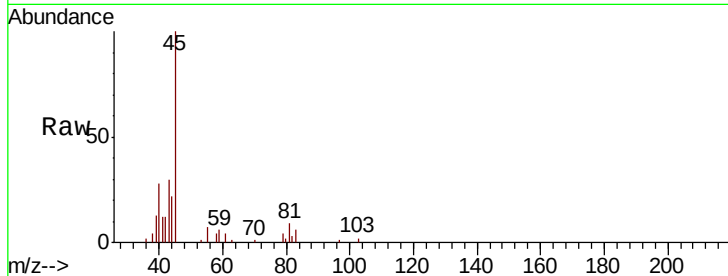




#19
Isopropyl Alcohol
Concen: 0.169 ppbv
RT: 4.05 min Scan# 347
Delta R.T. 0.03 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

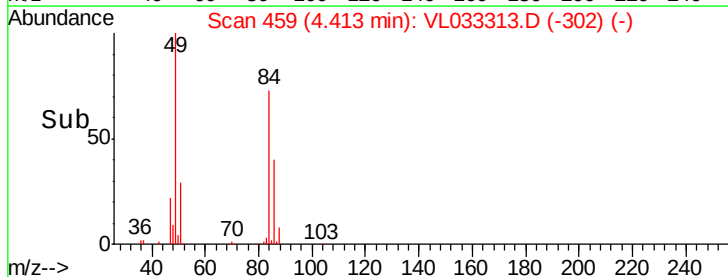
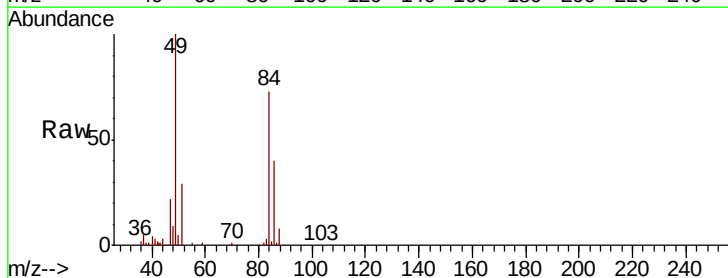
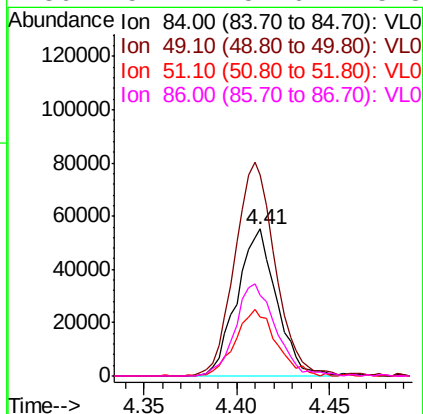
Instrument :
MSVOA_L
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DP-VPB201-AIR-UW-20190305DUP

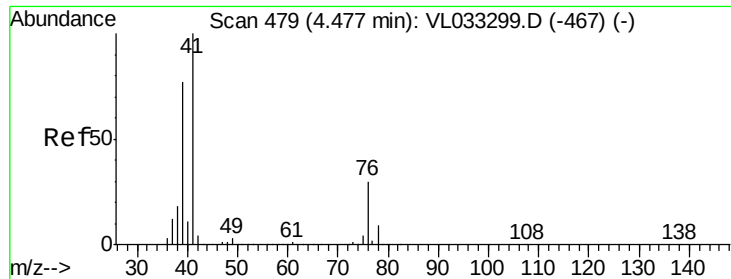
Tgt Ion: 45 Resp: 10098
Ion Ratio Lower Upper
45 100
58 0.0 1.4 2.0#



#20
Methylene Chloride
Concen: 2.072 ppbv
RT: 4.41 min Scan# 459
Delta R.T. 0.00 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

Tgt Ion: 84 Resp: 82010
Ion Ratio Lower Upper
84 100
49 136.9 115.4 173.2
51 40.5 35.7 53.5
86 54.7 52.6 78.8





#21

Allyl Chloride

Concen: 0.046 ppbv

RT: 4.44 min Scan# 466

Delta R.T. -0.04 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

DP-VPB201-AIR-UW-20190305DUP

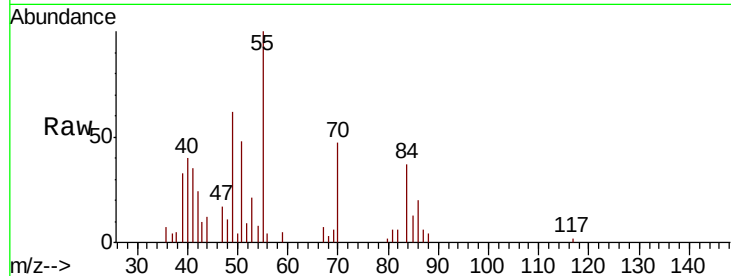
Tgt Ion: 41 Resp: 2694

Ion Ratio Lower Upper

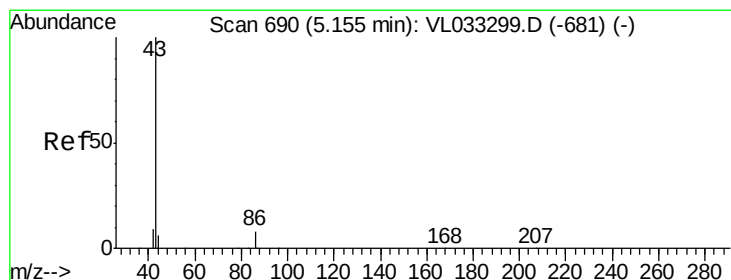
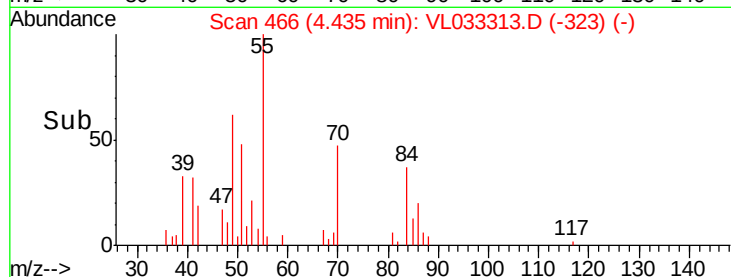
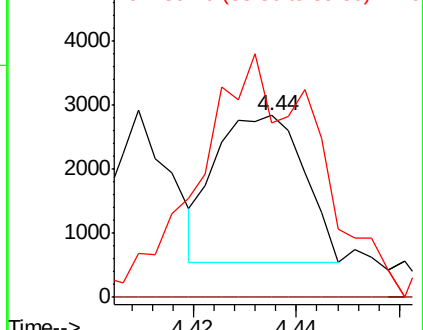
41 100

76 0.0 24.3 36.5#

39 225.0 64.4 96.6#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0



#23

Vinyl Acetate

Concen: 0.072 ppbv

RT: 5.14 min Scan# 686

Delta R.T. -0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Tgt Ion: 43 Resp: 10174

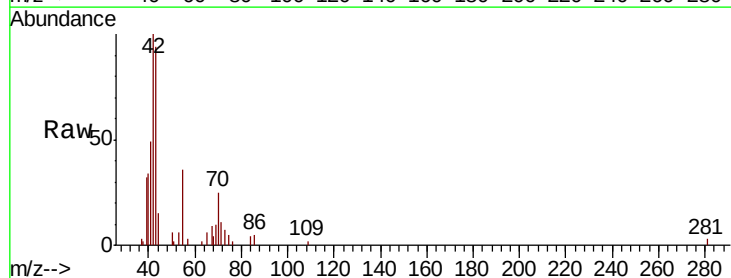
Ion Ratio Lower Upper

43 100

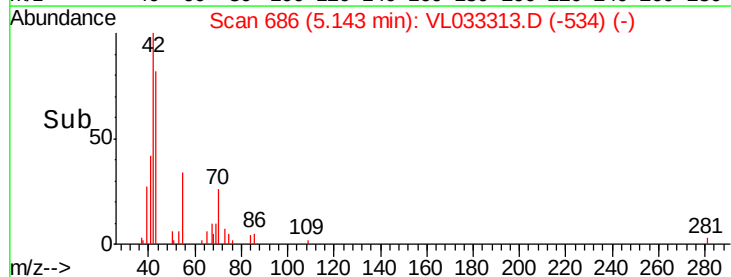
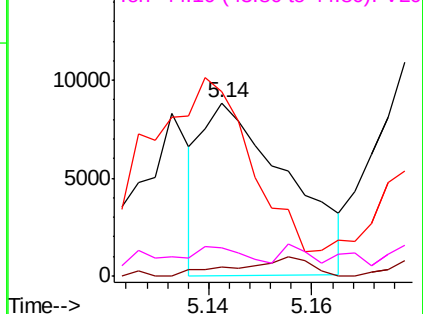
86 8.2 5.8 8.8

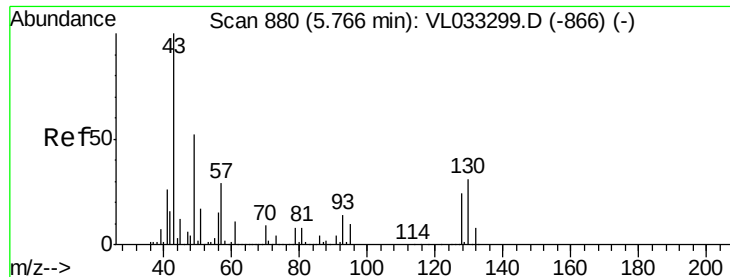
42 133.2 7.8 11.8#

44 9.7 4.1 6.1#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0





#25

Ethyl Acetate

Concen: 0.339 ppbv

RT: 5.78 min Scan# 883

Delta R.T. 0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 43 Resp: 60440

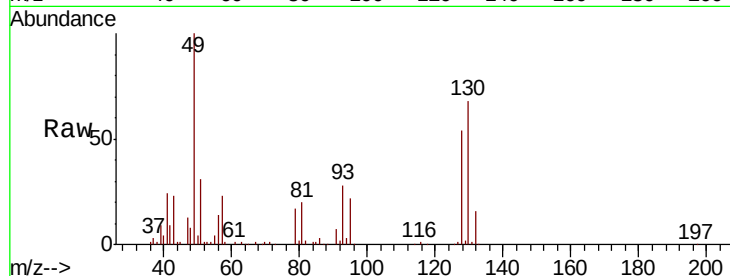
Ion Ratio Lower Upper

43 100

45 4.5 8.0 12.0#

61 2.9 7.5 11.3#

70 3.9 5.7 8.5#



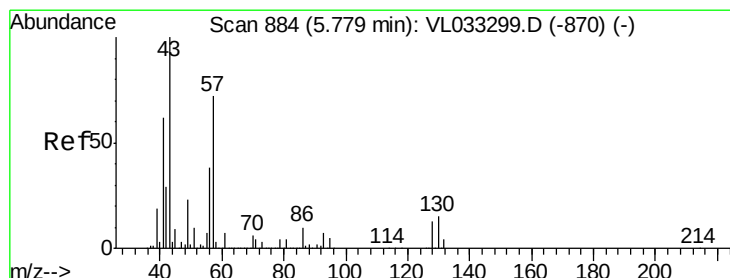
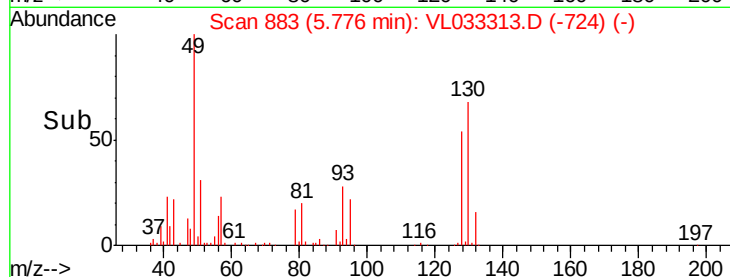
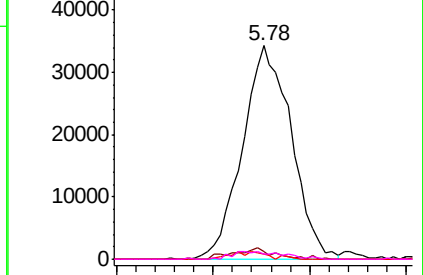
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 0.752 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.00 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Tgt Ion: 57 Resp: 62533

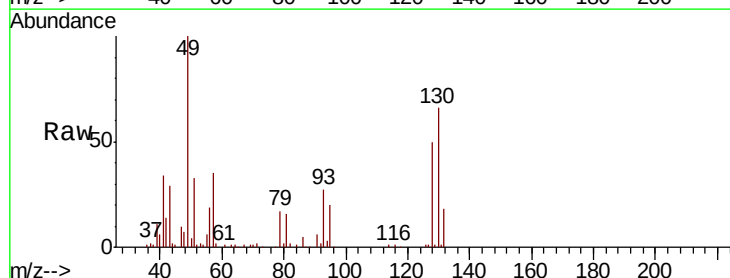
Ion Ratio Lower Upper

57 100

41 102.1 71.6 107.4

43 98.2 179.2 268.8#

56 58.6 42.2 63.2



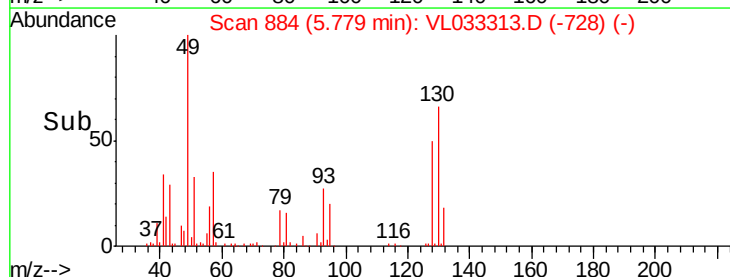
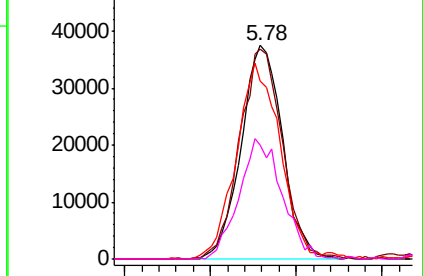
Abundance

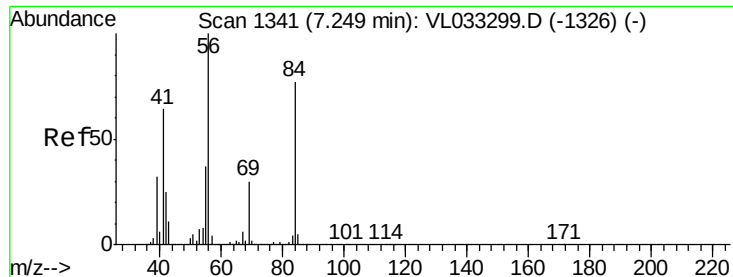
Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

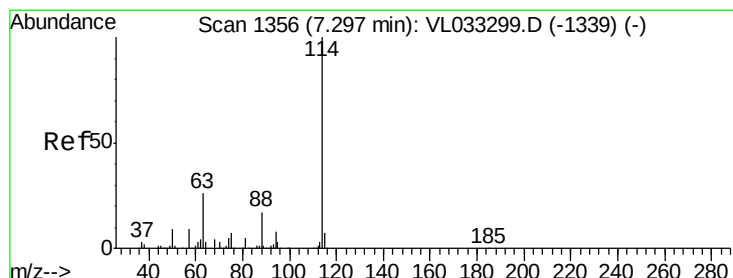
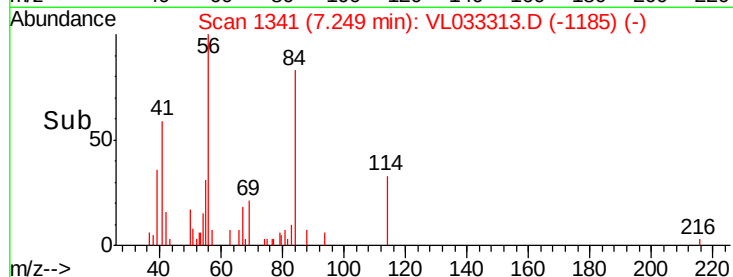
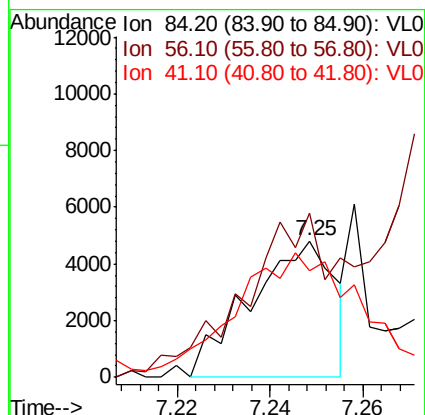
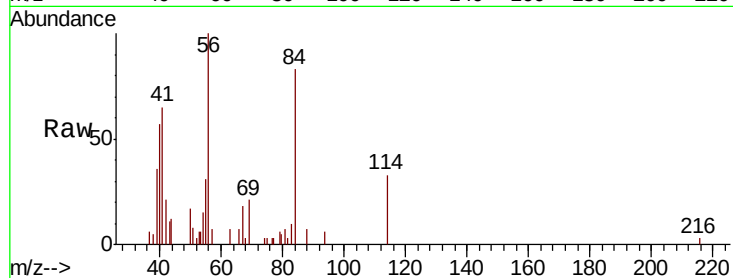




#30
Cyclohexane
Concen: 0.094 ppbv
RT: 7.25 min Scan# 1341
Delta R.T. 0.00 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

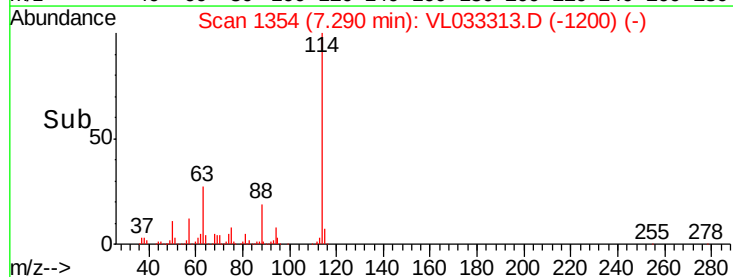
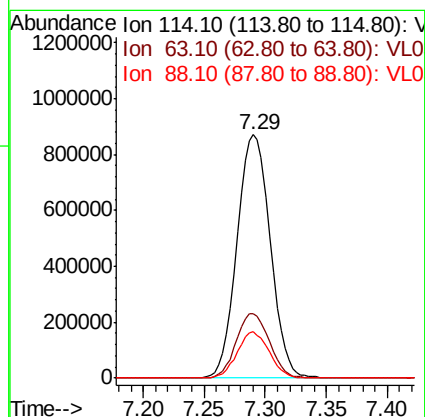
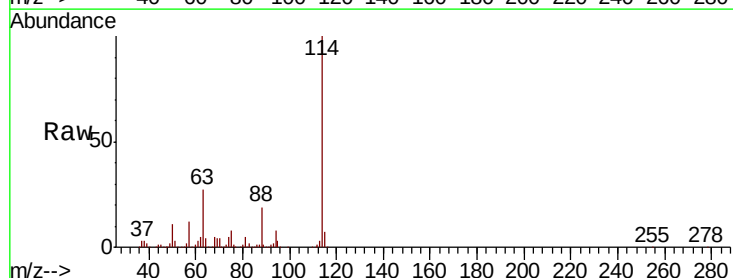
Instrument :
MSVOA_L
ClientSampleId :
DP-VPB201-AIR-UW-20190305DUP

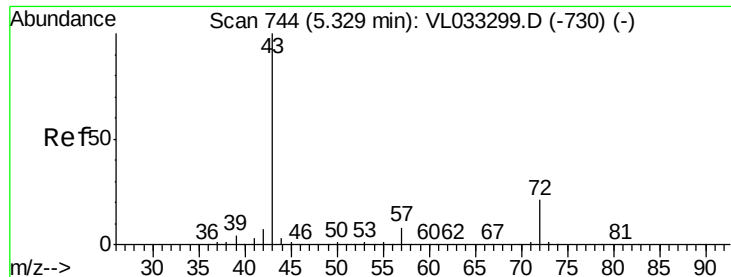
Tgt Ion: 84 Resp: 6079
Ion Ratio Lower Upper
84 100
56 0.0 109.8 164.8#
41 144.8 68.1 102.1#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1354
Delta R.T. -0.01 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

Tgt Ion: 114 Resp: 1644171
Ion Ratio Lower Upper
114 100
63 26.6 21.3 31.9
88 18.4 14.5 21.7





#34

2-Butanone

Concen: 0.260 ppbv

RT: 5.34 min Scan# 746

Delta R.T. 0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

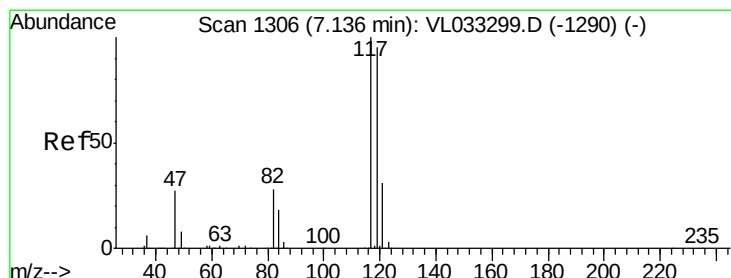
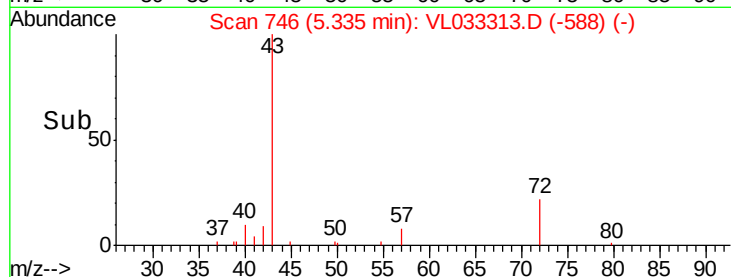
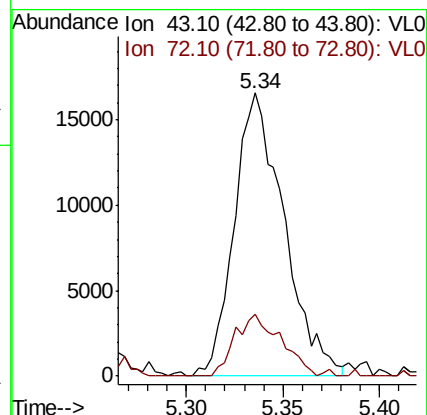
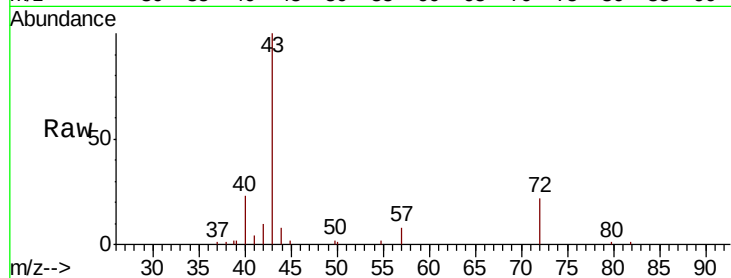
DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 43 Resp: 29503

Ion Ratio Lower Upper

43 100

72 20.8 17.2 25.8



#35

Carbon Tetrachloride

Concen: 0.080 ppbv

RT: 7.14 min Scan# 1306

Delta R.T. 0.00 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

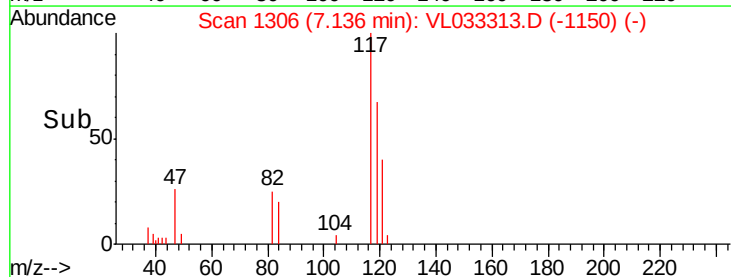
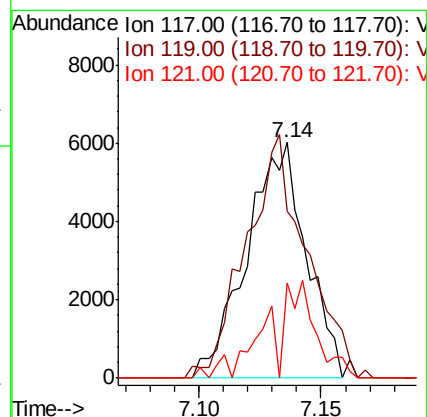
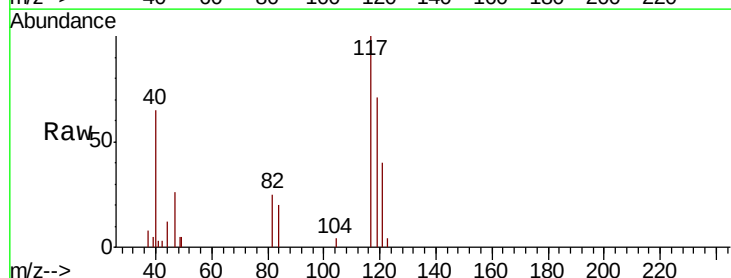
Tgt Ion: 117 Resp: 10170

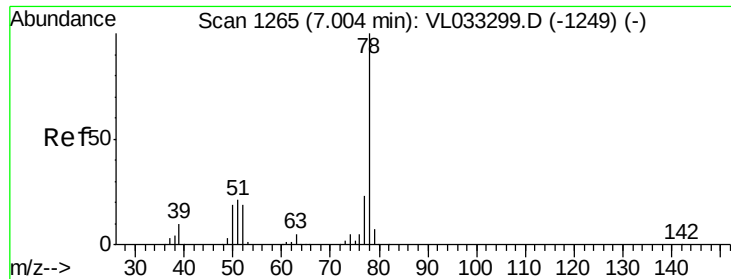
Ion Ratio Lower Upper

117 100

119 65.9 75.9 113.9#

121 40.2 25.2 37.8#

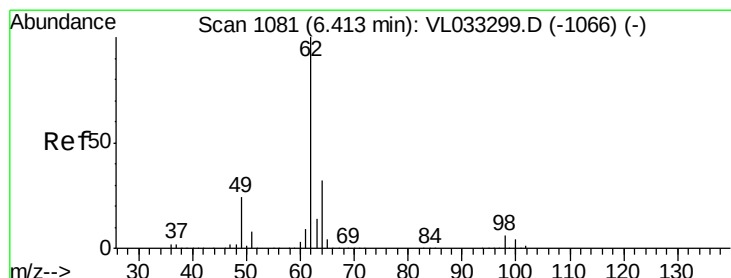
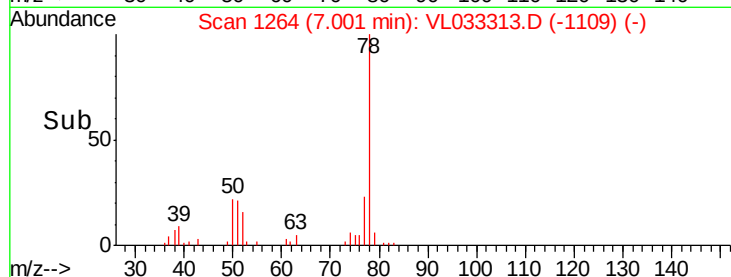
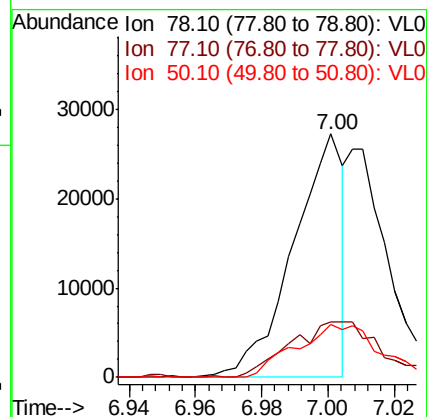
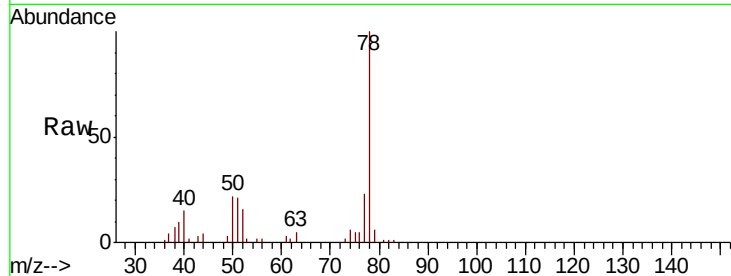




#36
Benzene
Concen: 0.178 ppbv
RT: 7.00 min Scan# 1264
Delta R.T. -0.00 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

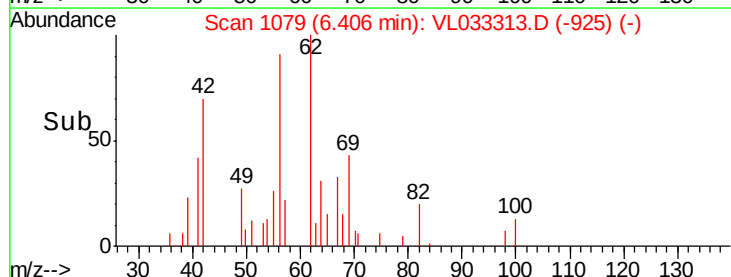
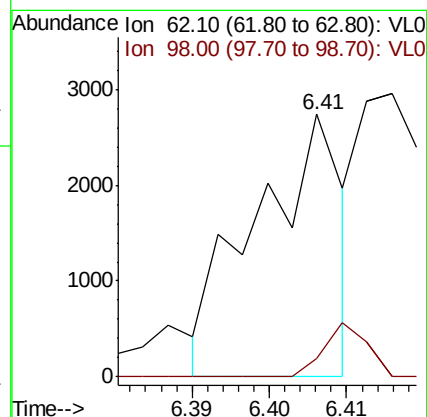
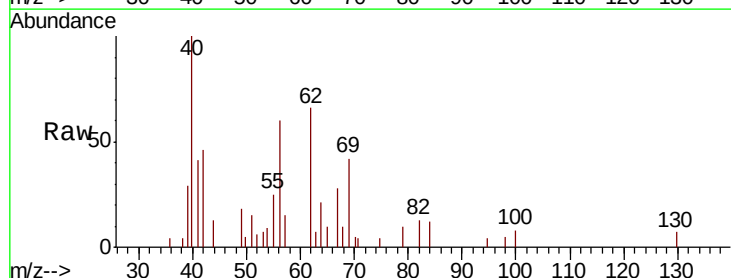
Instrument :
MSVOA_L
ClientSampleId :
DP-VPB201-AIR-UW-20190305DUP

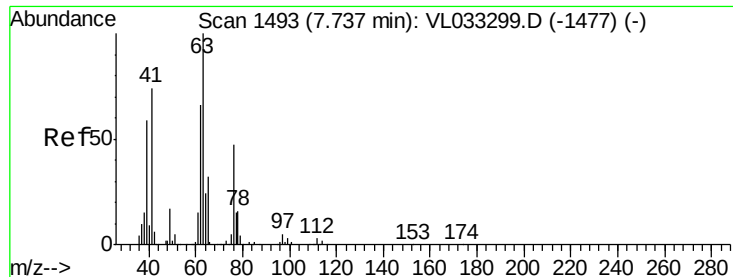
Tgt Ion: 78 Resp: 28663
Ion Ratio Lower Upper
78 100
77 22.6 18.6 28.0
50 22.0 15.2 22.8



#37
1,2-Dichloroethane
Concen: 0.022 ppbv
RT: 6.41 min Scan# 1079
Delta R.T. -0.01 min
Lab File: VL033313.D
Acq: 14 Mar 2019 12:56

Tgt Ion: 62 Resp: 2131
Ion Ratio Lower Upper
62 100
98 11.8 4.4 6.6#

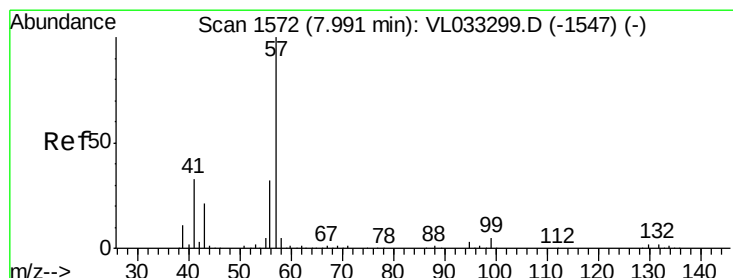
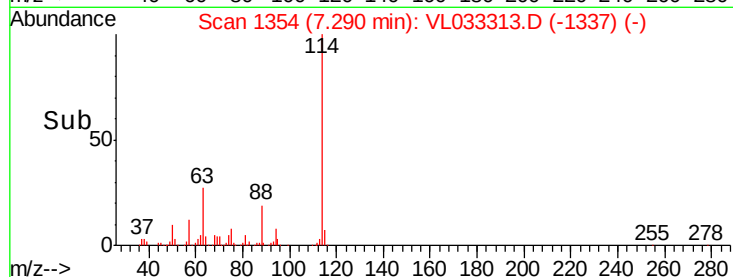
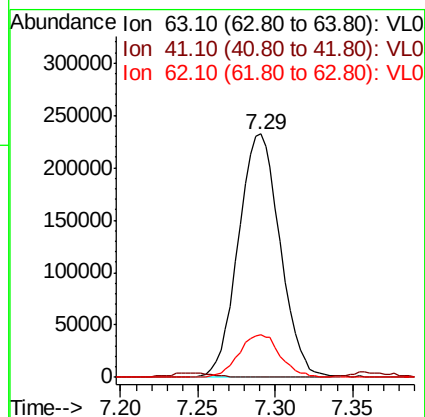
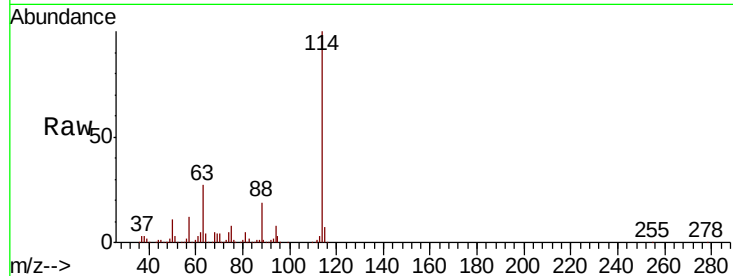




#39
 1,2-Dichloropropane
 Concen: 7.037 ppbv
 RT: 7.29 min Scan# 1354
 Delta R.T. -0.45 min
 Lab File: VL033313.D
 Acq: 14 Mar 2019 12:56

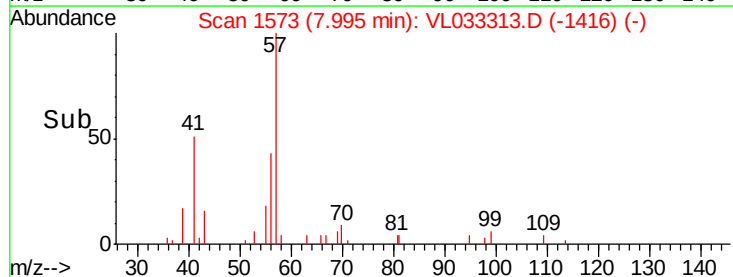
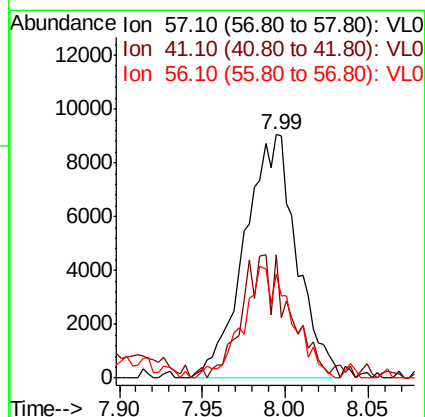
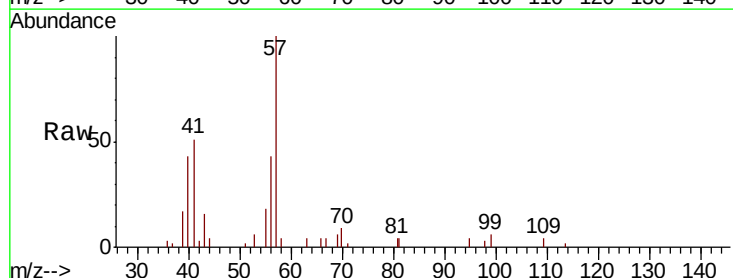
Instrument :
 MSVOA_L
 ClientSampleId :
 DP-VPB201-AIR-UW-20190305DUP

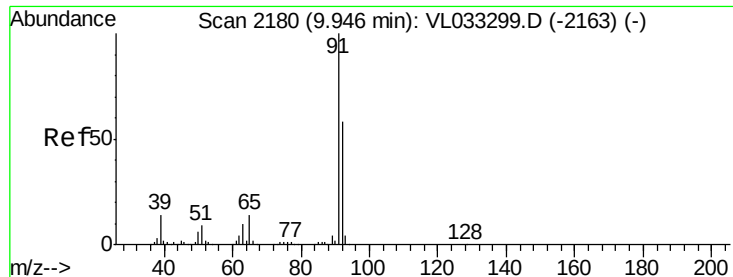
Tgt Ion: 63 Resp: 436391
 Ion Ratio Lower Upper
 63 100
 41 0.0 59.0 88.4#
 62 17.6 53.0 79.4#



#44
 2,2,4-Trimethylpentane
 Concen: 0.072 ppbv
 RT: 7.99 min Scan# 1573
 Delta R.T. 0.00 min
 Lab File: VL033313.D
 Acq: 14 Mar 2019 12:56

Tgt Ion: 57 Resp: 19789
 Ion Ratio Lower Upper
 57 100
 41 49.0 25.9 38.9#
 56 42.6 24.6 36.8#





#53

Toluene

Concen: 0.863 ppbv

RT: 9.95 min Scan# 2180

Delta R.T. 0.00 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

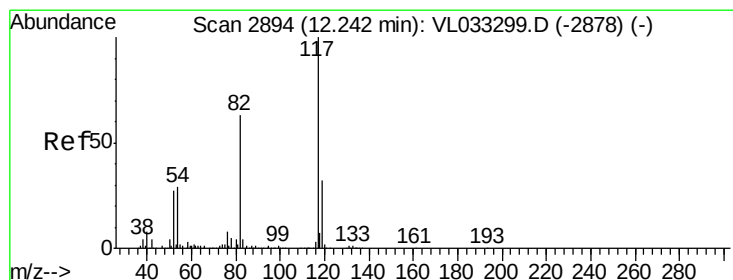
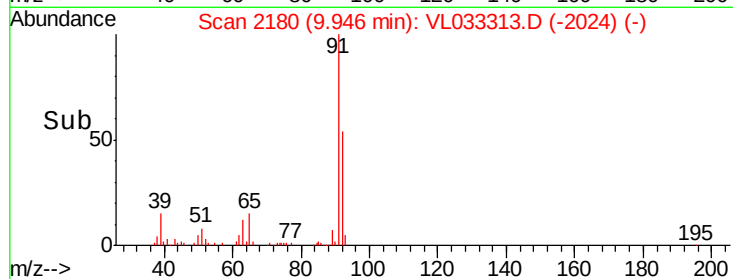
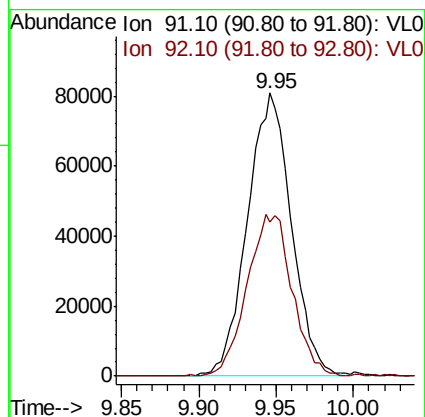
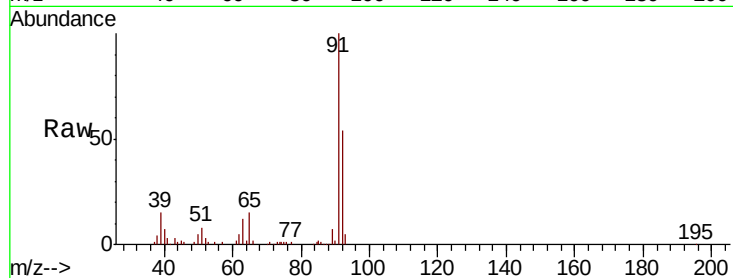
DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 91 Resp: 159627

Ion Ratio Lower Upper

91 100

92 58.9 47.4 71.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

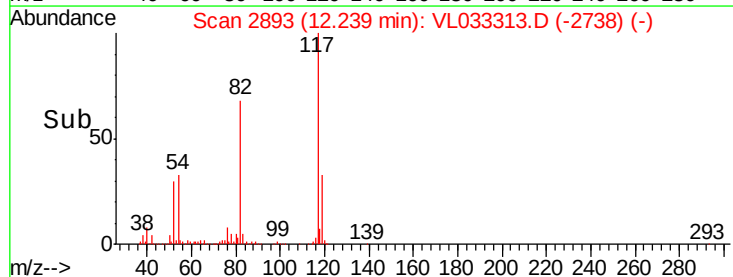
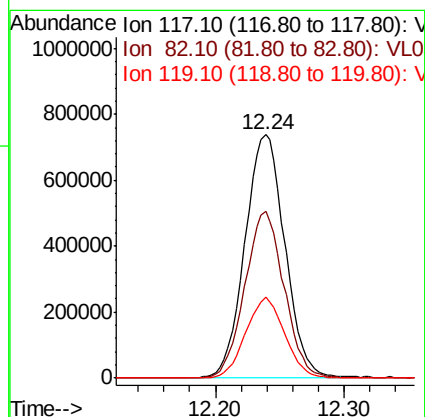
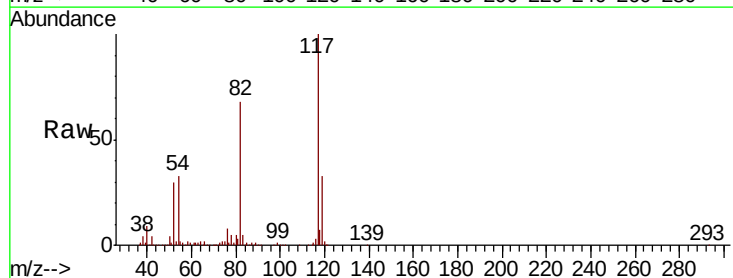
Tgt Ion: 117 Resp: 1593870

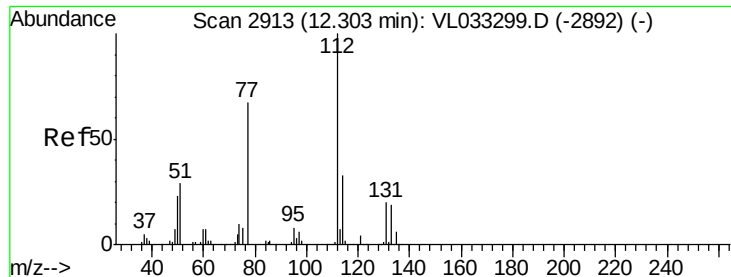
Ion Ratio Lower Upper

117 100

82 67.8 51.3 76.9

119 32.4 27.0 40.4





#57

Chlorobenzene

Concen: 0.021 ppbv

RT: 12.29 min Scan# 2910

Delta R.T. -0.01 min

Lab File: VL033313.D

Acq: 14 Mar 2019 12:56

Instrument :

MSVOA_L

ClientSampleId :

DP-VPB201-AIR-UW-20190305DUP

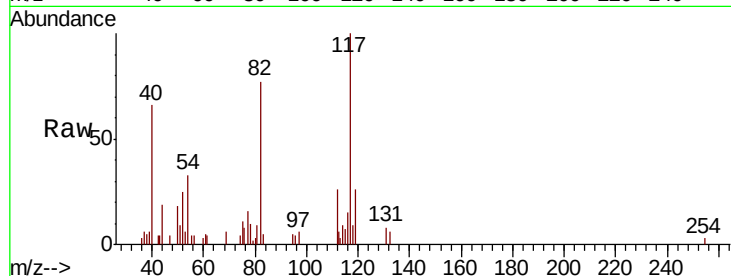
Tgt Ion: 112 Resp: 2703

Ion Ratio Lower Upper

112 100

77 9.9 54.7 82.1#

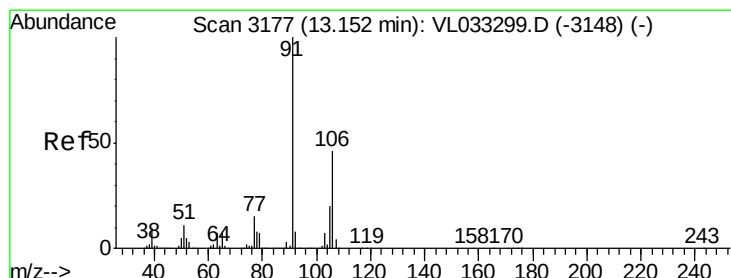
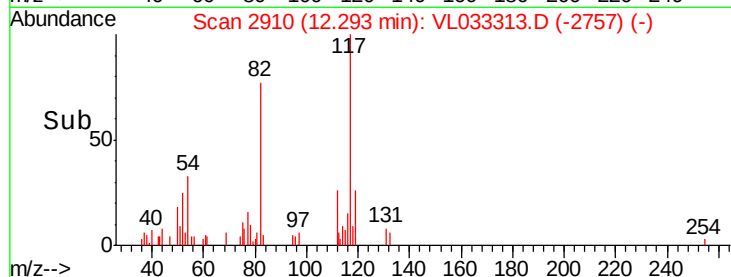
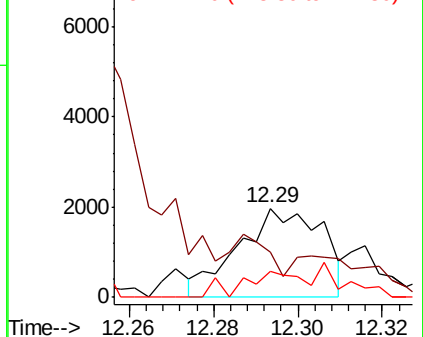
114 62.7 29.6 36.2#



Abundance Ion 112.10 (111.80 to 112.80): V

Ion 77.10 (76.80 to 77.80): VL0

Ion 114.10 (113.80 to 114.80): V



#59

m/p-Xylene

Concen: 0.027 ppbv

RT: 13.15 min Scan# 3177

Delta R.T. 0.00 min

Lab File: VL033313.D

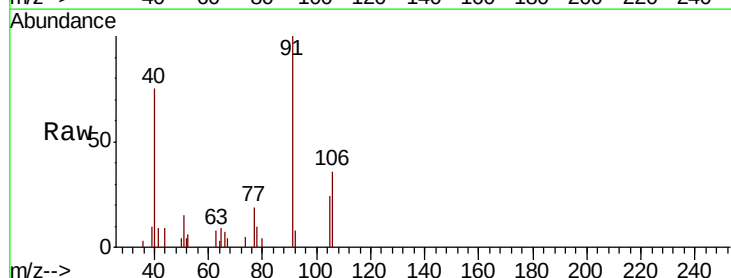
Acq: 14 Mar 2019 12:56

Tgt Ion: 91 Resp: 5233

Ion Ratio Lower Upper

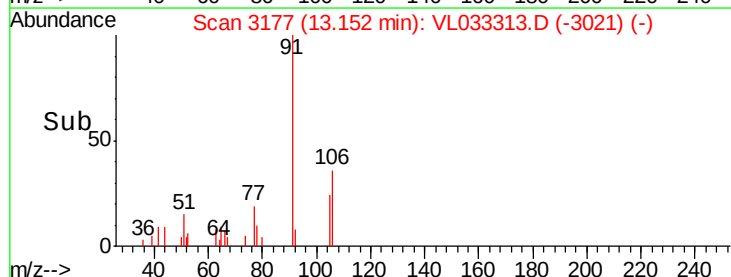
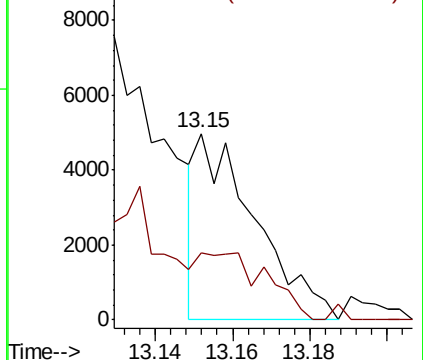
91 100

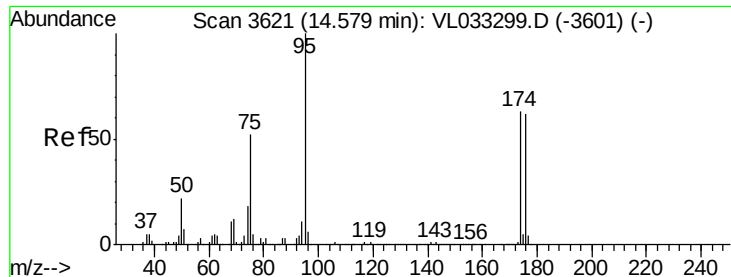
106 0.0 0.0 0.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

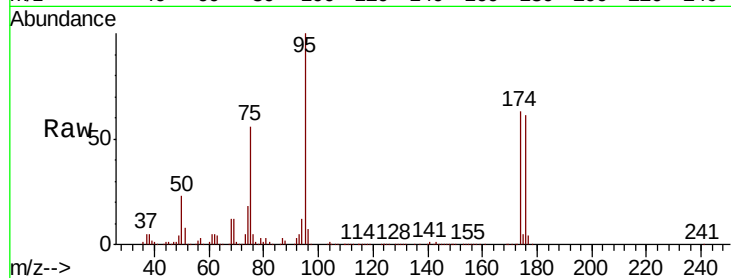




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.409 ppbv
 RT: 14.58 min Scan# 3620
 Delta R.T. -0.00 min
 Lab File: VL033313.D
 Acq: 14 Mar 2019 12:56

Instrument :
 MSVOA_L
 ClientSampleId :
 DP-VPB201-AIR-UW-20190305DUP

Tgt Ion: 95 Resp: 1267034
 Ion Ratio Lower Upper
 95 100
 174 64.4 51.9 77.9
 175 4.6 3.9 5.9



Abundance Ion 95.10 (94.80 to 95.80): VL0
 Ion 174.00 (173.70 to 174.70): V
 Ion 175.00 (174.70 to 175.70): V

